## Rec'd PCT/FF6 27 SEP 2004



For receiving Office use only

International Application No.

International Filing Date

10/509354

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

Name of receiving Office and "PCT International Application"

	Applicant's or agent's (if desired) (12 characte	file reference Pers maximum) P51088D WO
Box No. I TITLE OF INVENTION		
Electro-Optic modulators		
Box No. II APPLICANT This person	n is also inventor	
Name and address: (Family name followed by given name; for a legal enti The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence	he address indicated in this	Telephone No.
Bookham Technology plc 90 Milton Park		Facsimile No.
Abingdon		Teleprinter No.
Oxon OX14 4RY		Applicant's registration No. with the Office
State (that is, country) of nationality:  GB	State (that is, country) GB	of residence:
This person is applicant for the purposes of:  all designated States III all designated the United States		the United States the States indicated in the Supplemental Box
Box No. III FURTHER APPLICANT(S) AND/OR (FURTH	ER) INVENTOR(S)	
Name and address: (Family name followed by given name; for a legal entit The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence and Takhelming State of the S	e address indicated in this e is indicated below.)	This person is:  applicant only  applicant and inventor inventor only (If this check-box is marked, do not fill in below.)  Applicant's registration No. with the Office
State (that is, country) of nationality:  GB	State (that is, country) of GB	of residence:
This person is applicant for the purposes of:  all designated the United States  all designated the United States	States except ates of America to	he United States the States indicated in the Supplemental Box
Further applicants and/or (further) inventors are indicated on	a continuation sheet.	
Box No. IV AGENT OR COMMON REPRESENTATIVE;	OR ADDRESS FOR O	CORRESPONDENCE
The person identified below is hereby/has been appointed to act or of the applicant(s) before the competent International Authorities a	as:	gent common representative
Name and address: (Family name followed by given name; for a legal entity The address must include postal code and name of cou	, full official designation. intry.)	Telephone No. +44 1865 841060
DOWNING, Michael Philip	1	Facsimile No.
Fry Heath & Spence LLP	L	+44 1293 776837
The Gables		Teleprinter No.
Massetts Road	L	
Horley, Surrey RH6 7DQ, GB		Agent's registration No. with the Office
Address for correspondence: Mark this check-box where no space above is used instead to indicate a special address to w	o agent or common repre hich correspondence sho	esentative is/has been appointed and the ould be sent.

Form PCT/RO/101 (first sheet) (March 2001; reprint January 2003)

Sheet	Nο		2	

Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)					
If none of the following sub-boxes is used, this sheet should not be included in the request.					
Name and address: (Family name followed by given name; for a legal enti The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence HOLDEN, Anthony James 15 Octavian Way Brackley Northamptonshire	applicated below.)  applicated below.)  applicated inventoring markets applicated inventoring markets.	ant only ant and inventor or only (If this check-box ked, do not fill in below.)			
NN13 5HX	Applicant s reg	istration No. with the Office			
State (that is, country) of nationality:  GB	State (that is, country) of residence: GB				
This person is applicant all designated for the purposes of:	States except the United States es of America only	the States indicated in the Supplemental Box			
Name and address: (Family name followed by given name; for a legal entit The address must include postal code and name of country. The country of th Box is the applicant's State (that is, country) of residence if no State of residence	address indicated in this is indicated below.)  application application inventor is mark	ant only on and inventor or only (If this check-box eed, do not fill in below.) istration No. with the Office			
State (that is, country) of nationality:	State (that is, country) of residence:				
This person is applicant all designated for the purposes of:	States except the United States es of America only	the States indicated in the Supplemental Box			
Name and address: (Family name followed by given name; for a legal entity The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence	address indicated in this is indicated below.)  applica  applica  invento is mark	nt only  nt and inventor  r only (If this check-box ed, do not fill in below.)  stration No. with the Office			
State (that is, country) of nationality:	State (that is, country) of residence:				
This person is applicant all designated for the purposes of:		the States indicated in the Supplemental Box			
Name and address: (Family name followed by given name; for a legal entity. The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence.	applicar applicar applicar inventor is marke	nt only  at and inventor  only (If this check-box  ed, do not fill in below.)  stration No. with the Office			
State (that is, country) of nationality:	State (that is, country) of residence:				
This person is applicant all designated for the purposes of:	tates except so f America the United States of America only	the States indicated in the Supplemental Box			
Further applicants and/or (further) inventors are indicated on	another continuation sheet.				

Form PCT/RO/101 (continuation sheet) (March 2001; reprint January 2003)

Box No. V DESIGNATION OF STATES

Mark the applicable check-boxes below; at least one must be marked.

The following designations are hereby made under Rule 4.9(a):

## Regional Patent

- EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- EP European Patent: AT Austria, BE Belgium, BG Bulgaria, CH & LI Switzerland and Liechtenstein, CY Cyprus, CZ Czech Republic, DE Germany, DK Denmark, EE Estonia, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, SI Slovenia, SK Slovakia, TR Turkey, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GQ Equatorial Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

N	ational Patent (if other kind of protection	or	treatment desired, specify on dotted line):			•
X	AE United Arab Emirates	X	GM Gambia	X	NZ	New Zealand
X	AG Antigua and Barbuda	X	HR Croatia	X	OM	I Oman
X	AL Albania	X	HU Hungary	X	PH	Philippines
X	AM Armenia	X	ID Indonesia	X	PL	Poland
X	AT Austria	X	IL Israel	X	PT	Portugal
	AU Australia					
X	AZ Azerbaijan	X	IS Iceland	X	RU	Russian Federation
X	BA Bosnia and Herzegovina	X	JP Japan			
			KE Kenya			
X	BG Bulgaria	X	KG Kyrgyzstan	X	SD	Sudan
X	BR Brazil	X	KP Democratic People's Republic	X	SE	Sweden
X	BY Belarus		of Korea	X	SG	Singapore
X	BZ Belize					
X			KZ Kazakhstan	X	SL	Sierra Leone
X	CH & LI Switzerland and Liechtenstein	X	LC Saint Lucia	X	TJ	Tajikistan
X	CN China	X	LK Sri Lanka	X	TM	Turkmenistan
X	CO Colombia	X	LR Liberia	_		Tunisia
X	CR Costa Rica	X	LS Lesotho	X	TR	Turkey
X	•••••••••••••••••••••••••••••••••••••••			X	TT	Trinidad and Tobago
X	CZ Czech Republic					
X	22 30					United Republic of Tanzania
X						Ukraine
X			<del>-</del>			Uganda
-	DZ Algeria					United States of America
			MG Madagascar			
	EE Estonia					Uzbekistan
-	ES Spain	_	Macedonia			
_	FI Finland	_	5			Viet Nam
X			MWMalawi			
X			MX Mexico			
	GE- Georgia					
X	GH Ghana		NO Norway	X	zw	Zimbabwe
Ch	eck-boxes below reserved for designating S	ate	s which have become party to the PCT as	fter	issu	ance of this sheet:

Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

Form PCT/RO/101 (second sheet) (January 2003)



If the Supplemental Box is not used, this sheet should not be included in the request.

- If, in any of the Boxes, except Boxes Nos. VIII(i) to (v) for which a special continuation box is provided, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No..." (indicate the number of the Box) and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:
- (i) if more than two persons are to be indicated as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;
- (ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;
- (iii) if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;
- (iv) if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
- (v) if, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "patent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "continuation" or "continuation-in-part": in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;
- (vi) if, in Box No. VI, there are more than five earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI.
- If, with regard to the precautionary designation statement contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.

## CONTINUATION OF BOX IV:

Additional Representatives:

FRY, Alan Valentine,

UNWIN, Stephen Geoffrey, .

TOWNSEND, Victoria Jayne,

LOCK, Graham James,

BODEN, Keith McMurray

CLAYTON-HATHWAY, Anthony Nicholas

all of:

Fry Heath & Spence LLP The Gables Massetts Road Horley, Surrey RG6 7DQ, GB

Form PCT/RO/101 (supplemental sheet) (March 2001; reprint January 2003)

~ .			5	
Sheet	No.		.5	

Box No. VI PRIORIT	TY CLAIM						
The priority of the follow	ring earlier application(s) is here	by claimed:					
Filing date	Number	Where earlier application is:					
of earlier application (day/month/year)	of earlier application	national application: country or Member of WTO	regional application:* regional Office	* international application: receiving Office			
item (1) 27 March 2002 (27/03/02)	0207166.0		GB				
item (2)				·			
item (3)							
item (4)							
item (5)							
Further priority clain	ns are indicated in the Suppleme	ntal Box.					
The receiving Office is re if the earlier application wabove as:	quested to prepare and transmit t as filed with the Office which for t	to the International Bureau the purposes of this interna	n a certified copy of the e tional application is the re	arlier application(s) (only eceiving Office) identified			
	m (1) item (2)	item (3) item	(4) Item (5)	other, see Supplemental Box			
* Where the earlier applic Industrial Property or one	ation is an ARIPO application, in Member of the World Trade Org	dicate at least one country ganization for which that e	earlier application was fil	ed (Rule 4.10(b)(ii)):			
Box No. VII. INTERN.	ATIONAL SEARCHING AUT						
	Searching Authority (ISA) (if twantom the Authority chosen; the two-		earching Authorities are o	competent to carry out the			
International Searching Au				t by or requested from the			
Date (day/month/year)	Numbe	er Coun	try (or regional Office)				
Box No. VIII DECLAR	ATIONS						
	ns are contained in Boxes Nos. Vicate in the right column the number			Number of declarations			
Box No. VIII (i)	Declaration as to the identity	of the inventor		: •			
Box No. VIII (ii)	Declaration as to the applicate, to apply for and be gra		international filing	One :			
Box No. VIII (iii)	Box No. VIII (iii) Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application :						
Box No. VIII (iv)	Declaration of inventorship United States of America)	(only for the purposes of	the designation of the	. One			
Box No. VIII (v)	Declaration as to non-prejud	dicial disclosures or excep	tions to lack of novelty	: .			

Form PCT/RO/101 (third sheet) (July 2002; reprint January 2003)

Sheet No. 6

## Box No. VIII (ii) DECLARATION: ENTITLEMENT TO APPLY FOR AND BE GRANTED A PATENT

The declaration must conform to the standardized wording provided for in Section 212; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No.VIII (ii). If this Box is not used, this sheet should not be included in the request.

Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate:

Combined declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)) and as to the identity of the inventor (Rules 4.17(i) and 51bis.1(a)(i)), in a case where the declaration under Rule 4.17(iv) is not appropriate:

in relation to this international application,

Bookham Technology plc is entitled to apply for and be granted a patent by virtue of the following:

- (i) Nickolay Zakhleniuk of 32 Haddon Park, Colchester, Essex CO1 2GX and Anthony James Holden of 15 Octavian Way, Brackley, Northamptonshire NN13 5HX are the inventors of the subject matter for which protection is sought by way of this international application
- (ii) Bookham Technology plc is entitled as employer of the inventors, Zakhleniuk and Holden
- (ix) this declaration is made for the purposes of:
- (a) all designations except the designation of the United States of America

This declaration is continued on the following sheet, "Continuation of Box No. VIII (ii)".

Form PCT/RO/101 (declaration sheet (ii)) (March 2001; reprint January 2003)



Sheet No. 7



Box No. VIII (iv) DECLARATION: INVENTORSHIP (only for the purpose of the designation of the United States of America)
The declaration must conform to the following standardized wording provided for in Sec ion 214; see Notes to Boxes Nos. VIII. VIII (i) to (v)
(in general) and the specific Notes to Box No. VIII (iv). If this Box is not used, this she, t should not be included in the request.

	Declaration of inventorship (Rules 4.17(iv) and 51bis.1(a)(iv)) for the purposes of the designation of the United Etates of America:
	I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a pat an is sought.
Ì	This declaration is directed to the international application of which it forms a part if filing declaration with application).
	This declaration is directed to international application No. PCT/
	I hereby declare that my residence, mailing address, and citizenship are as stated no or to my name.
	I hereby state that I have reviewed and understand the contents of the above-identifical international application, including the claims of said application. I have identified in the request of said application, in compliance vith PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Frior Applications," by application tumber, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor's criticate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, including date before that of the application on which foreign priority is claim id.
	Prior Applications:
	***************************************
	I hereby acknowledge the duty to disclose information that is known by me > be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.
:	I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 11 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.
]	Name: Nickolay ZAKHLENIUK
1	Residence: Colchester, England city and either US state, if applicable, or country)
ľ	Mailing Address: 32 Haddon Park, Colchester
	Essex CO1 2GX, United Kingdom
Ĺ	nventor's Signature:
١	ame: Anthony James HOLDEN
c	esidence; Brackley, England ity and either US state, if applicable, or country)
4	Biling Address: 1-Remulue Way, Brackley 15, Octavian Way
	-Northamptonshire, NN18 70X, United Kingdom Brackley, Northanficashire
í	ventor's Signature:  not contained in the request, of if declaration is corrected or ded under Rule 26ter after the filing of the international plication. The signature must be that of the inventor, not that of agent)  Date: 25 / 3 / 2003  (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)
	This declaration is continued on the following sheet, "Continuation of Box No. V II (iv)".
-	Transfer of Box vol. 7 In (19)

Form PCT/RO/101 (declaration sheet (iv)) (March 2001; reprint January 2003)

Sheet No.	8
DHOULT TO.	

Box No. IX CHECK LIST; LAN	GUAGE	OF FILE	NG				
This international application contain  (a) in paper form, the following numsheets:		item(s)	ternational application is accompanied by the following (mark the applicable check-boxes below and indicate in plumn the number of each item):	Number of items			
request (including		i. 🗆	fee calculation sheet	:			
declaration sheets) :	8	2. 🗆	original separate power of attorney	:			
description (excluding sequence listings and/or		3. 🗆	original general power of attorney	:			
tables related thereto) :	22	4. 🗶	copy of general power of attorney; reference number,				
claims :	4	l	if any:	: 3			
abstract :	1	5.		:			
drawings :	3	6.	priority document(s) identified in Box No. VI as item(s):	•			
Sub-total number of sheets: sequence listings:	38	7. 🗆	translation of international application into (language):				
tables related thereto :  (for both, actual number of		8. 🗆	separate indications concerning deposited microorganis or other biological material				
sheets if filed in paper form, whether or not also filed in		9. 🗆	sequence listings in computer readable form (indicate type and number of carriers)				
computer readable form; see (c) below)		(i),	copy submitted for the purposes of international sear Rule 13ter only (and not as part of the international a	ch under pplication) :			
Total number of sheets:  (b) only in computer readable fo (Section 801(a)(i))	38 rm	(ii)	(only where check-box (b)(i) or (c)(i) is marked in left co additional copies including, where applicable, the co purposes of international search under Rule 13ter	olumn) py for the :			
(i) sequence listings		(iii)	together with relevant statement as to the identity of t copies with the sequence listings mentioned in left co	he copy or lumn :			
(c) also in computer readable for (Section 801(a)(ii))	m	10. 🔲	tables in computer readable form related to sequence lists (indicate type and number of carriers)	ngs			
(i) sequence listings (ii) tables related thereto		(i)	copy submitted for the purposes of international searce Section 802(b-quater) only (and not as part of the international)	ch under ernational			
Type and number of carriers (disk CD-ROM, CD-R or other) on which contained the	ette, are	(ii)	[ (only where check-box (b)(ii) or (c)(ii) is marked in left additional copies including, where applicable, the copurposes of international search under Section 802(b-	column) by for the cquater)			
sequence listings:		(iii)	\(\sigma\) together with relevant statement as to the identity of the				
☐ tables related thereto:			copies with the tables mentioned in left column	.;			
(additional copies to be indicated un items 9(ii) and/or 10(ii), in right col		11.	other (specify):				
Figure of the drawings which should accompany the abstract:	1		ge of filing of the English				
Box No. X SIGNATURE OF APP Next to each signature, indicate the name of the	LICANT	T, AGENT	FOR COMMON REPRESENTATIVE capacity in which the person signs (if such capacity is not obvious fro	m reading the request).			
DOWNING, Michael Philip							
		For re	ceiving Office use only	•			
<ol> <li>Date of actual receipt of the purport international application:</li> </ol>	ed		2	2. Drawings:			
Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:							
1. Date of timely receipt of the required corrections under PCT Article 11(2):							
5. International Searching Authority (if two or more are competent): ISA /  6. Transmittal of search copy delayed until search fee is paid							
		For Inter	national Bureau use only				
Date of receipt of the record copy by the International Bureau:							

Form PCT/RO/101 (last sheet) (January 2003)